



Community-Based Research (CBR) Project Proposal Form

U-Links Administration Only

Project Number *(automatically generated by CBR database):*

Recommended Courses and/or Disciplines *(i.e. GEOG4030Y, FRSC4890Y, IDST3700Y/3710H/3720H, ERSC3160H, PSYCH or Alternatives):*

Recommended Faculty Advisors:

PROJECT TITLE: Critical Tributaries Restoration

A – CONTACT INFORMATION

Date: 3 May 2024

Contact person: Dale Leadbeater

Phone: (705) 879-3546

Email: heritage@harcourtpark.ca

B – COMMUNITY ORGANIZATION

a) Organization's name and address:

Harcourt Park Incorporated (HPI),

Box 72

Harcourt, ON K0L 1X0

b) Briefly state the organization's purpose and the products or services offered:

Harcourt Park is a privately owned, largely wilderness park consisting of some 6,900 acres in the Haliburton Highlands of the Province of Ontario, Canada, about halfway between the Town of Bancroft and Haliburton Village, and a few miles south of the southernmost extension of Algonquin Park. It is almost entirely within the Township of Harcourt and is part of a municipality called Dysart et al (Wargo, J.A., 2010).

Harcourt Park members (leaseholders) elect a Board of Directors who, on a volunteer basis, run the business of the park governed by Letters Patent, covenants in our leases and By-laws, together with policies and procedures.

c) Has an immediate supervisor or board approved this application?

The Forestry Advisory Committee and the Harcourt Park Board of Directors have reviewed proposed projects summary and have unanimously supported a submission. Copies of applications will be sent to all involved.

C - PROJECT SCOPE

- a) Full year undergraduate CBR projects are allotted 220 hours total, per 1-2 students on a single project. The condensed hours are similar to six weeks of full-time work. Full term students would be working on this project from September to April as part of a course, while balancing work from other courses as well. Half term students will be working on this project from September - December or January to April. Does the scope of your project fit within this timeframe?

Yes • No • Comments:

- b) Select the theme(s) for your project:

• Cultural • Economic • Environmental • Social • Other:

- c) Based on the timeframe and complexity of your project, please indicate the potential project scale:

- Single year project
- Multi-year project (requiring follow up or several parts)
- Ideal for undergraduate students
- Ideal for graduate students (requires specialized knowledge/in-depth consideration of theory)

- d) Is your project appropriate for a single student or a group?

Two or more students for safety reasons given that there are bears and moose in the area and field work is involved

- e) Describe the purpose of the project:

Harcourt Park is positioned at the height of land on the Algonquin Dome. As such, there are many small tributaries that form a network that drains to the Irondale/Gull River watershed in the west, and to the Elephant Lake/Madawaska watershed in the east. These tributaries are small but in combination they transport significant volumes of water, much of it cold groundwater. Based on multi-year research led by Fleming Professor Charles Rumsey, it was determined that one of these small tributaries was important to rearing of Brook Trout in East Lake. Further, two of the tributaries appear to sustain coldwater upwellings where the Trout Spawn. Four of the tributaries are crossed by the road network and only just recently has the impact of road maintenance on fish habitat been considered. A consultant was hired to prepare mapping of these tributaries to assist with siting of a communications tower. This is a small example of how useful this mapping would be in terms of public awareness and as input to frameworks for road and driveway management.

The purpose of the project is to advance our understanding of the density of the tributary network in Harcourt Park and to develop a tool to assist in identifying appropriate mitigation plans for road and driveway maintenance. At the moment members think nothing of filling in wetlands and tributaries to meet their needs (access, parking).

- f) How will the project benefit your organization and/or clients?

At the moment we have little understanding of the extent of tributaries feeding our lakes. A project to name them was started in 2023, however progress is very slow. Using suitable aerial imagery, a draft map of these watercourses that are too small to show up on provincial or county mapping could be prepared.

This map would be the basis for a field inventory to confirm the existence of the tributary, whether it is ephemeral, intermittent or permanent, and comment on condition and/or need for rehabilitation. This program will assist us to understand our risk factors and provide justification for guidelines that can be communicated to the membership and enforced.

g) How will the results of this project benefit Haliburton County?

Mapping at this scale is not available at the County or Dysart et al level of government, and therefore the routine road maintenance program can not incorporate suitable mitigation for road construction and maintenance. The HP tributary mapping project would be a pilot that can be presented to the lower and higher tier municipality together with case studies and recommendations to improve protection of waterways throughout the County. The filling of wetland connected to a waterway in Haliburton Village that resulted in the death of an elder Snapping Turtle christened Grace, may not have happened had the implications to the watershed been understood.

h) How did you hear about U-Links Centre for Community Based Research?

Word of Mouth Social Media Newsletter News Article Other: _____

D – RESEARCH DESIGN

a) What are the proposed research questions to be answered?

What is the extent of the tributary network that supports the lakes in Harcourt Park? How is it associated with other environmental features such as wetlands and fish spawning habitat. What framework for protection can we develop to avoid nutrient, salt and other pollutant loading downstream.

b) What are your ideas on how these questions might be answered (i.e. survey, literature review, field work etc.)?

Literature review to include Lake Partnership and Love Your Lake documents that may provide insight into the function of these small, numerous tributaries.

GIS classification to identify drainage to the lakes that cross the HP road network.

Field Work: Confirm GIS aerial interpretation of tributaries. Develop a report-card system for high level inventory of tributary characteristics and existing impacts.

Workshop: with members to gather additional information and educate.

Reporting: Integration of background review and field data to identify gaps and link tributaries to their associated functions where possible. Develop recommendations for mitigation of negative impacts due to road and driveway maintenance.

c) Do you have knowledge of or expertise with these types of research methods?

HPI does not have access to aerial imagery at the resolution necessary to interpret these small tributaries. However we have knowledgeable members who can provide information regarding fisheries, water quality and road maintenance regimes (e.g., calcium spreading to keep dust down).

E - SCREENING AND/OR TRAINING

a) Do the students require any specific screening or training? (e.g. police checks, confidentiality agreements, CPR, WHMIS):

Yes No

Comments: Safety precautions regarding working in the field and on roadsides. Personal Protective Equipment would be necessary. A health and safety plan should be developed.

EXAMPLES: Projects involving vulnerable populations may require police checks. Some types of field work may involve WHMIS or other safety related training. Students and hosts working on boats need to understand and follow the U-Links Boat Safety Guidelines.

F – RESEARCH ETHICS

a) Does the research involve human subjects? (i.e. surveys, interviews)

Yes No

NOTE: If yes, the students may be required to submit an application for ethical review of the research. This process may take several weeks and will need to be taken into consideration when creating project timelines.

b) If your project involves collecting human subject data (i.e. interview transcripts), would you like access to that “raw” data at the end of the project, in addition to receiving the “summary” of data in the final report?

Yes No N/A

c) Does the organization/employer have policies about research ethics approval?

Yes No

If yes, please explain:

G – PROJECT TASKS AND TIMELINE *(This section should be completed by the final draft)*

a) Please outline the major tasks and timelines involved in completing the project.

These tasks include important information to be gathered, key stakeholders who should be involved relevant dates for your organization, and critical meetings for the student to attend. Your Coordinator can help you complete this section.

Task: *Project Orientation*

Objective: *Meet with hosts, confirm project outcomes and requirements, transfer of relevant documents*

Date:

Task: *Finalize detailed project outline/project agreement*

Objective: *Finalize project details, responsibilities, logistics, etc.*

Date:

Task: *Interpretation of Aerial Photography in GIS*

Objective: *Prepare preliminary map of potential tributaries. HPI can share existing knowledge*
Date: Fall 2024

Task: Field Survey of Potential Tributary locations.
Objective: *Data Collection, Management and Identification as applicable*
Date: Fall of 2024

Task: Updates to Mapping and Reporting
Objective: *Finalize mapping, report on methods and recommend management opportunities.*
Date: Fall/Winter 2024-2025

**b) Indicate important start and end dates for the project, if applicable:
Spring 2024 to Fall/Winter 2025**

H – RESOURCES

NOTE: All known and needed resources should be listed in this section (e.g. for project coordination, data collection and analysis, software, hardware, photocopying, office supplies, workspace, travel expenses, food and refreshments, training, etc.). Students' travel expenses are reimbursed by U-Links at the end of the term.

a) What resources are needed to support the research – financial or otherwise? Please indicate what, if any, resources your organization might be able to provide.

HPI will provide volunteers. Expenses to be determined and paid by Harcourt Park to include a workshop in Wilberforce or Harcourt Community Centre.

b) Do you anticipate needing funding or other types of resources? If so, please explain (including any ideas on where resourcing may be obtained):

No

I – KNOWLEDGE SHARING

NOTE: Please note the researcher(s) will own the copyright for all work completed as part of his/her involvement, but the lead organization/group/employer may use all project outputs in whole or in part, as it sees fit as long as the researcher(s) is duly credited as the author. If work is completed collaboratively, copyright will be decided by all project participants.

a) How are the project results to be circulated and made useful to the broader community? Please indicate all that applies from the list below:

To be discussed but the following are possible:

- Academic article
- Conference/forum
- Manual
- Marketing, promotional, newsletter, outreach materials

- Policy brief
- Report
- Roundtable
- Video – may cost more but a great idea
- Workshop
- Presentation to the host organization
- Not sure of the above, let's talk some more

b) If there are special circumstances where results might not be made public, please explain:

J - ACKNOWLEDGEMENT

a) Are you able to credit U-Links when utilizing project results for the development of new programs, funding applications, policy, and other community endeavors? *(Suggestions: cite U-Links and display our logo in your organization's printed matter and on your website, credit U-Links when speaking about your project in public and in the press, social media etc.)*

Yes No Possibly HPI would ask that U-Links reciprocate.

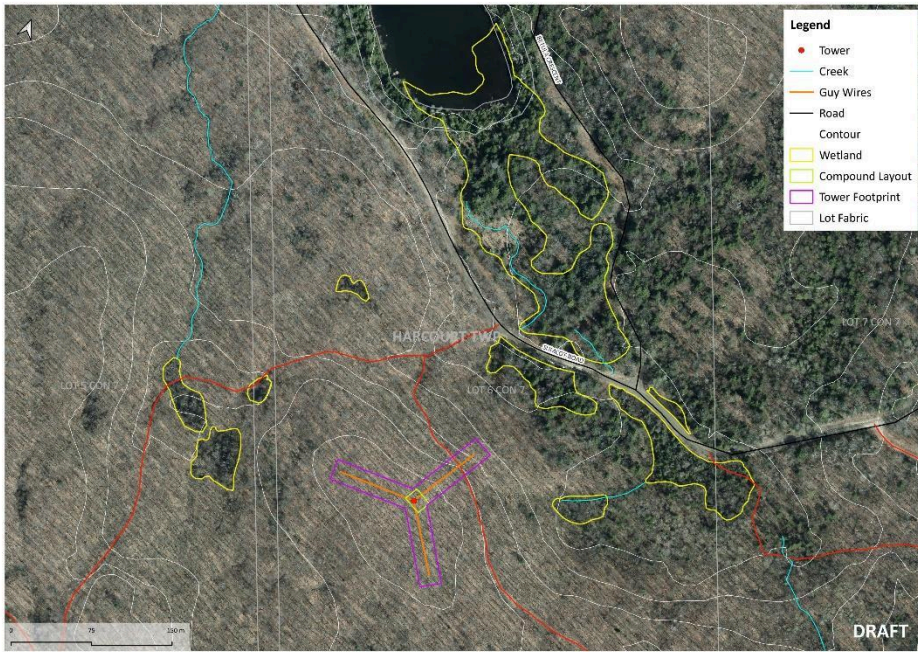
b) Following successful completion of the research project, with results beneficial to the goals of your organization, would you consider a financial contribution to U-Links?

Yes No Possibly

c) Can we highlight your project on our website and in social media?

Yes No

K – PROJECT PROMOTION



Photograph 1: Example of interpretation of tributaries



Photograph 2: Naming of tributaries



Photograph 3: Example of road widening beside tributary; culvert under road out of photo on left